

SBA04 SERIES BALL VALVE ACTUATOR

DESCRIPTION

SBA04 series ball valve actuator is using bi-directional motor. Matching with SBV series ball valve, it is mainly used in central air-conditioning system, heating system, water treatment, and production industry to control the flow of chilled/hot medium



CHARACTERISTIC

- Bi-directional AC motor
- Apply to valves of DN32 to DN50 (can be also apply to valves of DN15-25 as per request)
- Fire-retardant ABS engineering plastic, measure up UL94V-0 standard
- With manual switch and position indicator
- Floating type or modulating type (with internal PCB)
- Detachable design, easy to install and maintain
- Fluid temperature and ambient temperature are hard to reach inside of actuator.
- High reliable and safety requirement level
- Actuator manual handle can be disassembled to install on the valve stem for opening or close the valve.
- 0(2)~10V dc or 0(4)~20mA dc control input signal, proportional control.
- 0~10V feedback signal.
- With LED open degree display for option

MODEL SELECTION

SBA 04 - XXX X

PRODUCT CODE
Ball valve actuator

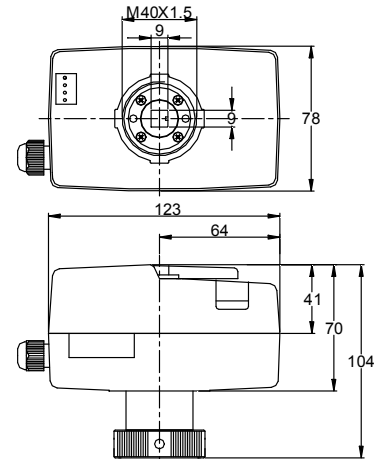
SERIES
04--The fourth series
ball valve actuator

VOLTAGE
024--24VAC 110--110VAC
120--120VAC 220--220VAC
230--230VAC

ADDITIONAL FUNCTION

E--Modulating control, with 0~10V feedback signal
(Only for 24VAC)

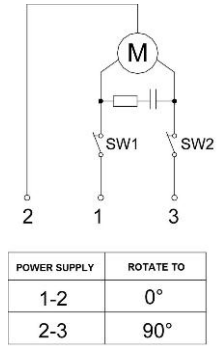
D--Modulating control, with 0~10V feedback signal,
and with LED display of open degree
(Only for 24VAC)



SPECIFICATIONS AND DATA

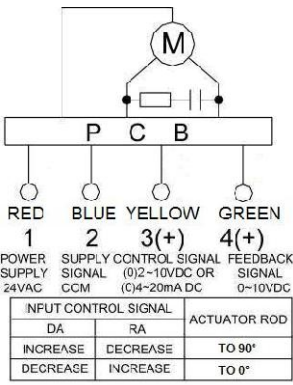
MODEL	SBA04-024E	SBA04-024D	SBA04-024	SBA04-110	SBA04-120	SBA04-220	SBA04-230	SBA04-240
POWER SUPPLY	24Vac	24Vac	24Vac	110Vac	120Vac	220Vac	230Vac	240Vac
POWER CONSUMPTION	4VA	4.5VA	3VA			5VA		
OPEN DEGREE DISPLAY	N/A	Yes	N/A					
CONTROL SIGNAL	0(2)~10V dc (input impedance: 200KΩ) or 0(4)~20mA dc (input impedance: 500Ω)		3 point floating signal					
FEEDBACK SIGNAL	0~10Vdc (1mA)		—					
DEFAULT SETTING	Input signal: 0~10Vdc; Mode: DA		—					
CURRENT FREQUENCY	50/60Hz							
TORQUE	≥5Nm							
OPERATION TIME	≈50s (50Hz, 90 °)							
MAXIMUM ANGLE	90° < limiter ≤ 95°							
CONNECTING WIRES	0.5~1 mm ²							
MATERIAL	COVER	Fireproof ABS engineering plastic						
	CHASSIS	Fireproof Reinforced nylon PA6-110						
	GEAR	POM (polyoxymethylene) + Brass HPb59-1 + iron-base powder metallurgy						
OPERATION TEMP.	-5~+50 °C							
STORAGE TEMP.	-30~70 °C							
IP CLASS	IP54							

WIRING

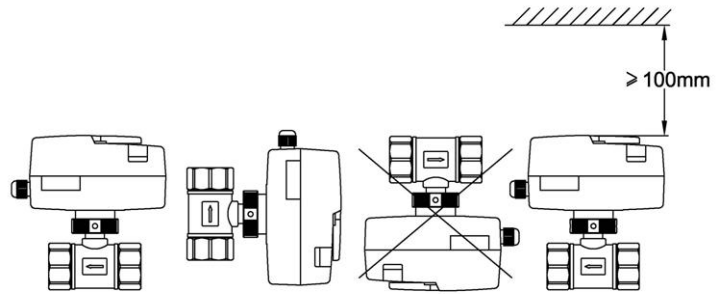


POWER SUPPLY	ROTATE TO
1-2	0°
2-3	90°

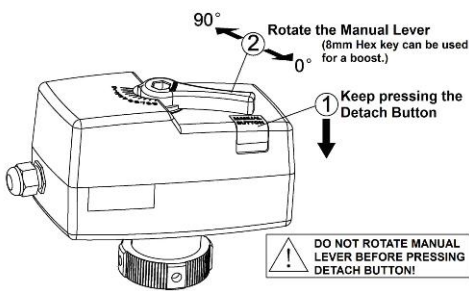
PCB WIRING



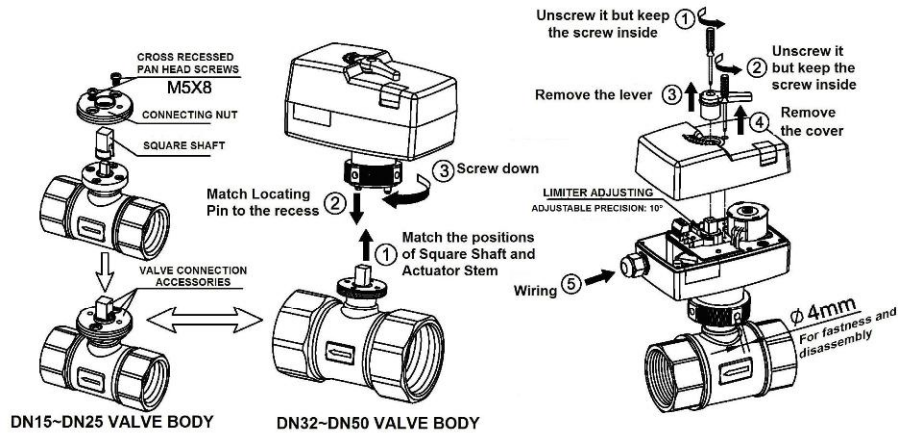
INSTALLATION INSTRUCTION



MANUAL SWITCH



ACTUATOR INSTALLATION



PCB SETTING

- Calibration mode:** After power is on, set JP1 switch "4" to position "ON" as request (refer to the below diagram) , then press SW1 calibration/reset button, power LED is flashing during calibration, and the actuator stem is rotating till to the end (has reached the end position of ball valves). Afterward the stem will rotate back to initial position. Power LED will stop flashing after the calibration mode is over. MCU will keep the position data in memory even power is off. Then JP1 switch "4" is needed to set to "OFF" after calibration is finished and back to operation mode. If this JP1 switch "4" is forgotten to set to "OFF" during operation, the actuator will operate as usual, but it will go through the calibration mode every time when power is on
- Operation mode:** When power is on, the actuator will work according to the control signal.
- Calibration/operation mode shift:** If user needs to switch calibration/operation mode, make sure the JP1 has been set correctly, then press SW1 calibration/reset button. Don't need to cut off power.

JP1 SWITCH SETTING					PCB		LED DISPLAY	
MODE	CTRL SIGNAL	0~10V DC	2~10V DC	0~20mA DC	4~20mA DC	DEFAULT SETTING		
OPERATION MODE	DA	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4		
	RA	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4		
CALIBRATION MODE	DA	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4		
	RA	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4	OFF ON 1 2 3 4		

Note: It is strongly recommended that JP1 switch should be set on operation mode in normal use